UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/661,190	09/12/2003	Thomas Beck	2001P02708WOUS	8295

7590 05/09/2007

SIEMENS CORPORATION
INTELLECTUAL PROPERTY DEPT.
170 WOOD AVENUE SOUTH
ISELIN, NJ 08830

EXAMINER	
PADGETT, MARIANNE L	
ART UNIT	**PAPER NUMBER**
1762	

MAIL DATE	DELIVERY MODE
05/09/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/661,190	BECK ET AL.	
	Examiner	Art Unit	
	Marianne L. Padgett	1762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *2/2/2006 & 9/12/2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *9-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *9-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *2/2/6, 9/12/3*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

1. The disclosure is objected to because of the following informalities: on page 6 of the specification (original & as preliminarily amended 9/12/2003) applicants improperly refer to claims in order to state their objectives. As the claims may change during the course of prosecution (as illustrated by the amendment) this is improper, as these are supposedly statements of the objectives when the case was filed.

Appropriate correction is required.

2. Claims 9-13, 18 & 26-27 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Applicants have canceled all the original claims and submitted new claims 9-13, 18 & 26-27, which are broader than the scope of the original disclosure, inclusive of any original claims, hence are inclusive of **New Matter**. In particular note that original claims 1 & 2 were directed to a method of testing "carbide-containing alloys...", with claim 2 specifying gas turbine blades & original claims 7-8 directed to specific Ni- or Co-based alloys. Original claim 4, which is directed to a method of coating a cast gas turbine blade (main body), as phrased necessitates that the blade must contain carbides that are present in the material capable of being cast to form the blade, hence while alloys are not explicitly specified, the examiner is not aware of a non-alloy material which will fit the claim limitations, nor was the disclosure found to teach such a non-alloy. Similarly, in the specification as originally filed, page 1 refers to either carbide-containing alloys or specific Ni- or Co-based superalloys, with sequential discussion, such as page 4, line 19-page 5, line 8+; page 6, lines 1-2; etc., providing similar disclosure, while page 6, line 25-page 7, line 2 provides disclosure equivalent to that of original claim 4. It is further noted that all these discussions/claims are directed to testing for specific types of corrosion, such as oxidation or sulfidization that are a problem for the taught carbide-containing alloys. As independent

claim 9 & the above listed dependent claims are directed to eddy current testing a main body made of any material used for any purpose (except claims 26-27 which specify object only) for any type of corrosion, this broadened scope contains significantly broader limitations than the original disclosure, hence unless shown otherwise must be considered to be New Matter.

Claims 9-13, 18 & 26-27 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for nondestructive eddy-current testing of carbide-containing alloys or Ni- or Co-based alloy for surface oxides or sulfidized corrosion, does not reasonably provide enablement for nondestructive eddy-current testing of bodies of all types of materials for all types of corrosion. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to use the invention commensurate in scope with these claims. See above discussion.

3. The amendment filed 9/12/2003 is objected to under 35 U.S.C. 132(a) because it introduces New Matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: on page 6 applicants have amended the objectives to refer to knew claim 9, which as discussed above appears to contain New Matter, hence the amended specification now also appears to contain New Matter.

Applicant is required to cancel the new matter in the reply to this Office Action.

4. Claims 12-13 & 15-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Use of relative terms that lack clear metes and bounds in the claims, or in the specification, or in cited relevant prior art, is vague and indefinite. In claims 12 & 13, see "near" used to describe "near-surface oxidated carbides" or "the near-surface sulfidized...", where the scope of "near" is not defined. The specification was reviewed for a definition of the term, but while the above phrases were found in the

specification, no definition or scope therefore was found. It is noted that while "low" & "high" are relative terms, the terminology "low-frequency" & "high-frequency" have art recognized meanings, which can be found in various sources, such as the dictionary (e.g. Webster's, page 971).

Also note in claims 12-13, that the reference to "the near-surface oxidated carbides" or "the near-surface sulfidized areas" have no clear antecedent basis, hence are objected to, but also as claim 9 from which they depend has no necessity of having any such carbides or sulfidized areas, the relationship of these limitations is unclear, especially considering these dependent claims refer to "a main body", which does not have clear or necessary antecedent basis to "a main body" referred to in the independent claim 9, nor do "corroded areas" (no article or antecedent basis) have any necessary connection/antecedences to "the corroded areas" or "an area of corrosion" referred to in claim 9.

The preamble of independent claim 15 states that the method is "for cast manufacture of a gas turbine blade...", however the body of the claim is not commensurate in scope with the preamble, as it contains absolutely no steps for cast manufacturing, but is entirely directed to the process of coating a previously made blade main body, presumably cast manufactured (implied but not necessitated by the phrase "after the casting") main body of a gas turbine blade. Note that "the casting" in the last line has no clear antecedence, hence is objected to, but further as casting has never necessarily been done, neither its timing nor what was cast has actually been specified or necessitated, thus such a limitation is only implied, not necessitated.

In dependent claim 17, dependent from independent claim 15, the claimed "the protective coating" has absolutely no antecedent basis, as claim 15 recites no such coating. Also note that "protective" may be considered a relative term, as it does not specify what is being protected against, however the further specification of the specific material can be considered to negate this relative aspect. While the phrasing of claim 17 is unclear is written, for purposes of examination the examiner will

assume that this is a problem of inconsistent terminology, where "protective coating" is intended to refer to the "anti-corrosive coating" of the independent claim.

In claim 17, it is additionally unclear if "M being selected from the (Fe, Co, Ni) group" is intended to encompass only the three listed elements or is intended to include also the elements in the same group of these elements in periodic table, all of which are considered to be group VIII transition metals. It's noted that "Y from the (Y, La, rare earths) group" is clear, as rare earths includes the elements on the periodic table with atomic numbers from 57-71, however as this includes lanthanum (atomic number 57), the Markush group is formally improper as having overlapping species.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In*

re Vogel, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

6. Claims 9-12, 18, 21, 23 & 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Törnblom (4,853,634), in view of Valleau et al. (5,028,100).

In Törnblom, see abstract; figures; col. 1, lines 7-14, 24-29 & 45-65; col. 2, lines 5-47; col. 3, lines 3-8 & 16-20; col. 4, lines 25-36, 54-68+, especially 31-33 & 58-63; col. 5, lines 14-45+; col. 6-8, especially col. 6, lines 1-10, 24-31 & 51-58; col. 7, lines 10-26 & 56-67; col. 8, lines 9-11, 17-27 & 48-65, which teach detection of cracks & magnetic regions that are oxide scales on hot cast billets of steel (notice is taken that steel is an iron alloy that contains carbon, i.e. carbides), via use of multifrequency eddy current testing. Törnblom discusses (col. 2) that the surface of cast billets are often coated with oxide scales of varying sizes (consider to read on claimed corrosion), which due to temperature considerations become magnetic thus causing disturbing influences on the eddy current testing equipment with respect to identification of cracked type faults. However, it is further taught (col. 5-8) that various types of cracks & oxide scale have different impedance variations at different magnitudes of different carrier frequencies & for certain frequencies, with use of various combinations of lower frequencies (for example <100 kHz) & higher frequencies (for example 1 MHz) to enable reliable discrimination between cracks and oxide scale/magnetic material. Törnblom discuss multiple steps, including where the first step chooses to use low-frequency (col. 5, lines 38-45+), also teaching with respect to frequency that the absolute value of the permeability decreases with increasing frequency because of the inherent inertia of the material with respect to rapid magnetic changes (col. 6, lines 32-41), thus appears to provide a scientific or efficiency motivation for employing the lower frequency, before the higher frequencies in the

taught eddy current testing technique. Törnblom also discusses some automated evaluation techniques, where alarm signals may be employed for the presence of magnetic material/oxide scale, so that if desired the removal and/or elimination of the magnetic material may be performed (col. 7, line 60-col. 8, line 26).

Törnblom differs from the present claims by not specifying that when the oxide scale (≡ corroded areas) is located that the thickness thereof is ascertained, however it would have been obvious to one of ordinary skill in the art that in order to discriminate from cracks & potentially remove oxide scales as taught, it would've been necessary to determine the thickness of the oxide scale in order to effectively carry out the teachings of the primary reference, especially considering that determining the location may be considered inclusive of determining dimensions of both the extent with respect to the surface & the depth or height of the oxide scale with respect to the surface, which considerations are inclusive of the claimed thickness. It would have been further obvious to one of ordinary skill in the art that such thickness determinations are consistent with the teachings of Törnblom, as Valleau et al teach employing several frequencies in order to provide accurate description of size & shape of a fault in a material with improved resolution using nondestructive eddy current testing. In Valleau et al., see the abstract; figures, especially 1; col. 1, lines 16-23; summary; col. 4, lines 7-55 describing the eddy current measuring, controlling, analyzing & display/alarm apparatus; col. 4, line 56-col. 10, line 34, especially col. 5, lines 1-10 & 21-26; col. 6, lines 46-68+; col. 7, lines 31-64; col. 8, lines 23-68; col. 9, lines 48-60+; & col. 10, lines 5-34 for extensive discussion of means of using multiple frequencies for fault detection inclusive of thickness determination, where although the exemplary techniques are mainly directed to graphitic fibers, the use of the same technique with other conductive materials, including ferrous materials, is also suggested, with teachings on how one would determine appropriate fault-response signatures for particular types of faults in other/particular materials. In col. 11, line 45-col. 12, line 29, Valleau et al. further teach inclusion of alarms in their apparatus to indicate the presence of faults, as well as steps of collecting & storing raw data, then employing programs to interpret and display the data, etc. Therefore,

it would have been obvious to one of ordinary skill in the art given the teachings of Törnblom to employ multifrequency eddy current testing techniques as suggested therein to determine the thickness of the oxide scale defects, since as shown in Valleau et al., multifrequency techniques are well capable of determining thickness of faults, including ferrous materials, such as would have been expected to include the steel billets of the primary reference, especially considering that Törnblom's suggestion of removal in order to be effective would require knowledge of the oxide scale dimensions, including thickness.

7. Claims 9 & 28 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Jourdian et al. (5,889,401).

Claims 10-11 & 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jourdian et al. (401), optionally in view of Törnblom ((4,853,634) discussed in section 6 above).

Jourdian et al. (401) teach determining the thickness of at least one layer superimposed on a substrate that is electrically conductive, specifically exemplified by zirconium alloy rods used for nuclear reactor fuel, which due to the very reactive environment in which they are employed, must be checked for the formation of zirconium dioxide on the outside of the alloy rods, which may be further complicated by the formation of an "crud layer", which usually consists of a mixture of Fe, Zn, & O (possible composition $ZnFe_2O_4$) and may be magnetic. The Zr dioxide & crud layer are considered to read on the claimed corrosion & corroded areas. Jourdian et al. (401) teach the use of eddy current measuring to determine the thickness, via adjusting the frequency for the alternating field to carry out the measurement at different frequencies within a broad frequency range, preferably over several orders of magnitude, such as between 100 kHz-20 MHz. Jordanian et al. notes that if only a single frequency were used in such a measurement the crud layer may neutralize the influence of the eddy current, so as to give inaccurate readings of thicker oxide layers that are actually present, hence the use of multiple frequencies is taught to be necessary in order to obtain accurate thickness measurements of the oxide corrosion on the zirconium alloy rods. In Jourdain et al. (401), see the abstract; figures especially 1-2; col. 1, lines 5-52; col. 2, line

23-col. 3 line 17+; col. 4, lines 4-26 & 63-col. 5, lines 13 & 65-col. 6, lines 13 & 38-67; col. 7, lines 44-60; & col. 8, line 65-col. 9, lines 10 & 26- 32, plus claims.

The teachings of Jourdain et al. (401) differ from depending claims 10-11 & 18 by not stating the order in which the frequencies are adjusted, i.e. from the low-frequency end to the high frequency end of the employed broad frequency range, or vice versa. Given 2 obvious choices for the taught adjustment (i.e. lower to higher, or higher to lower), all things being equal it would've been obvious to one of ordinary skill in the art to vary the frequencies in either direction, thus making the claimed relationship obvious. However, alternately Törnblom as discussed above was also noted to employ eddy current technique for measuring oxide corrosion (oxide scale with magnetic properties) on conductive metal surfaces, where multifrequency testing was employed with teachings of lower frequency then higher frequency usage, where choice of suitable frequency for efficient detection suggested taking into consideration that absolute value of the permeability decreases with increasing frequency, because of the inherent inertia of the material with respect to rapid magnetic changes, appearing to suggest that the taught use of lower frequency before higher frequency was more efficient, hence it would've been obvious to one of ordinary skill in the art to employ such an order in the taught frequency adjustment of Jourdain et al. in order to optimize the efficiency of the thickness measurement process.

8. Claims 13-14, 19-20, 22 & 24-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Törnblom, in view of Valleau et al., as applied to claims 9-12, 18, 21, 23 & 28 above, and further in view of M.J. Woulds, "How to Cast Cobalt-Based Superalloys", or Culling (5,310,522).

The combination of Törnblom, in view of Valleau et al. does not teach Ni-or Co-based superalloys, nor specify that the object being tested for corrosion is a gas turbine component, such as a blade, however the article by M. J. Woulds (1st col., p.46; 1st, 2nd & 5th paragraphs in continued section, p.97) or the patent to Culling (abstract; col. 1, lines 6-21; summary; examples, especially example 1 on col. 3, lines 60-col. 4, lines 46, noting col. 3, line 68 & table 1, with the alloys of the Culling's invention

have only a couple weight % Fe more than Ni, while Hastelloy X has 18.12 % Fe & 48.45 % Ni) indicate that superalloys that are cobalt-based, or Fe-Ni-Cr alloys, respectively, may be cast & may have corrosion (oxidation and/or sulfation) problems as claimed which are desire to be minimized, as well as indicating their known usage for airfoil or turbine components. Hence, it would've been obvious to one of ordinary skill in the art when casting components of such materials, including for turbine parts, such as gas turbine blades to test such components after manufacture, i.e. casting, to insure equality of the components produced the a testing procedures, such as set forth in Törnblom, in view of Valleau et al., which combination establishes a procedure that includes testing for corrosion on metal substrates that have been cast, inclusive of oxidative corrosion which may be desired to be removed, because it is old and well-known that such corrosion can be detrimental to the useful life of such components & testing would enable both quality control and repair/removal of any corrosion found.

9. Claims 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Törnblom, in view of Valleau et al., as applied to claims 9-15 & 18-28 above, plus M.J. Woulds, "How to Cast Cobalt-Based Superalloys", or Culling (5,310,522) and further in view of James et al. (2002/0066770 A1 = PN 6,491,208 B2).

While the above combination of Törnblom, Valleau et al., & M.J. Woulds or Culling discusses the claimed testing, providing reasons for doing so, it does not discuss subsequent processing of tested products, such as turbine components, however James et al. provides relevant teachings concerning fabrication & repair of superalloy turbine components, including blades. In James et al. (770), see figures 2-3; [0001-3] teaching the process is for part fabrication &/or repair, including for turbine components, noting Ni & Co-based superalloy materials for use in turbine components, such as blades, which may be cast & are known to be coated with protective coatings, including bond coatings providing oxidation resistance & improve adhesion for the thermal barrier coating, where common bond coat materials include MCrAlY, where M = Ni, Co, Fe or mixtures thereof; [0005-6] concerning the no need to repair

cracks & complications due to the presence of contaminants on the surface; [0007] cleaning an area before deposition; [0022] for repair or fabrication process involving components formed of superalloy materials, where [0023] the component may be any turbine engine part & [0024] turbine parts are subjected to any of a variety of nondestructive examinations including the option of eddy current tests to identify discontinuities which may be cracks on our other types of discontinuities including those resulting from oxidation or chemical attack. Preparation of the part surface [0025] includes cleaning a way contaminants, such as products of oxidation of the base material or deposits of foreign substances, where cleaning may be by any known method. After surface preparation [0027] deposition is then applied to the part surface &/or repair surface. While James et al.'s exemplary discussion is mainly directed towards the repair option, they explicitly teach that their technique may be employed in fabrication, as well as noting conventional use of cast superalloy materials & protective coatings as claimed, hence from these teachings of James et al. & the teachings of the above combination, which include the recognition of the presence of oxidation in casting procedures of materials such as used in James et al., it would've been further obvious to one of ordinary skill in the art to employ eddy current testing procedures, such as taught by Törnblom, in view of Valleau et al., because the teachings of James et al. indicate that the presence of oxidation contaminants are detrimental to turbine blade components, such that they should be tested for by processes inclusive of eddy current testing & removed before proceeding with coating processes. The examiner takes notice that as cleaning in general improve the adherence of subsequent coatings they may generically be considered activation processes, thus in the claimed procedure there is no clear or necessary differentiation between generic cleaning of the surface & generic activating of the surface.

10. Other art of interest includes: JP 64-59064 to Inukai et al. teaching eddy current thickness measurement of oxide scale on steam turbine rotors; Bour et al. (6,051,972), who teach a further eddy current inspection technique using two or more frequencies to determine the condition (cracks, wear,

clearance variations, etc.) of a metal body, in this case a metal (steel) to having a thin layer of material with magnetic or electrical characteristics different from the "metal in-depth"; Oliver (5,017,869), who teaches measuring thickness of the coating using a variable-frequency eddy current, with a typical frequency sweep of between about 10 kHz-10 MHz, where an exemplary sweep raises the frequency to determine a transition frequency in the coating thickness determination (abstract; col. 1, lines 5-43 & 65-col. 2, lines 30; col. 3, lines 50-68; & claims 24-33); Beeck et al. (6,534,975 B2), has further teaching of turbine blades made of nickel-based superalloys & protective coatings inclusive of claimed MCrAlY, with eddy current determination of protective layer thickness; Jaworowski et al. (6,165,542) & Becker (6,040,694 to the same assignee as applicants) with teachings equivalent to Beeck et al.; patents to Schnell et al. (7,175,720 B2 & 7,150,798 B2), which are not prior art but have multifrequency eddy current testing systems of interest for MCrAlY coated components.

11. Claims 9-14 & 18-28 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 16-29 & 31-32 of copending Application No. 10/525,026. Although the conflicting claims are not identical, they are not patentably distinct from each other, because while the copending case is more detailed concerning the eddy current multifrequency process & claims limitations in different orders, the process claimed therein encompasses the broader process of the present claims. Also while the copending case's claims have been amended to delete gas turbine from the description of the component, it still has a dependent claim 16 directed to the component being a blade or a vein, such that considering the materials claimed for the base body & the type of degradation (oxidized carbides) being tested for, it would've been obvious to one of ordinary skill in the art that the types of blades and vanes contemplated were gas turbine blades, especially in light of the specification. Note that determination of a depth of a degraded region is considered equivalent to determination of its thickness.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

12. Claims 15-17 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 16-29 & 31-32 of copending Application No. 10/525,026 in view of James et al. (2002/0066770 A1 = PN 6,491,208 B2; discussed above).

The claims of the copending case (026) do not have limitations directed towards coating the base body or vane after determining the degradation thereon, however the references of James et al., which were discussed above in section 9, provide reasons for obviousness of claimed coating after testing, which may be combined with 10/525,026 claims for substantially reasons as set forth above.

This is a provisional obviousness-type double patenting rejection.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marianne L. Padgett whose telephone number is (571) 272-1425. The examiner can normally be reached on M-F from about 8:30 a.m. to 4:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks, can be reached at (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MLP/dictation software

5/1/2007